Oil and Gas News Briefs Compiled by Larry Persily January 17, 2019

Louisiana LNG developer will start work as soon as FERC gives OK

(Reuters; Jan. 15) - Venture Global LNG urged federal regulators on Jan. 15 to approve construction of its planned Calcasieu Pass liquefied natural gas export terminal in Louisiana by Jan. 22. Venture Global told the Federal Energy Regulatory Commission in a filing it was "ready to commence construction of this multibillion-dollar project as soon as authorized by the commission." FERC's published timeline for its decision on the project application is Jan. 22.

"We have made very significant financial commitments to our vendors and suppliers, acting in reliance on the expectation the commission will act on a timely basis in accordance with its established schedule," Venture Global said. The \$4.5 billion Calcasieu Pass project would produce about 10 million tonnes of LNG per year.

Venture Global, which also is working to develop the \$8.5 billion, 10-million-tonne-peryear Plaquemines LNG export facility in Louisiana, said it expects Calcasieu Pass to enter service in 2022 and Plaquemines in 2023. Venture Global said it has secured binding 20-year LNG offtake agreements from units of Shell, BP, Italy's Edison, Portugal's Galp Energia, Spain's Repsol, and Polish Oil and Gas Co.

Engineering contracts awarded for LNG expansion in Australia

(The West Australian; Jan. 15) - Woodside has pushed its Scarborough LNG project forward by awarding four engineering contracts without financial support from its 25 percent joint-venture partner BHP. Woodside announced Jan. 15 the award of front-end engineering contracts for the entire scope of the \$US11 billion Scarborough LNG project. Woodside CEO Perter Coleman said award of the contracts would support the project schedule and Woodside's targeted final investment decision in 2020.

U.S. engineering firm McDermott will perform the front-end engineering and design for the floating gas production unit. The offshore field holds an estimated 7.3 trillion cubic feet of gas. A joint venture between OneSubsea and Subsea 7 won the engineering work for the SURF — subsea, umbilicals, risers, and flowlines. Both contracts include the option to build the facilities if the project proceeds. WorleyParson's subsidiary Intecsea will design the 267-mile pipeline to the onshore Pluto LNG plant.

The Scarborough project will take offshore gas to the Burrup Peninsula to be processed at an expanded Pluto LNG plant. Bechtel in 2018 was awarded the FEED contract for a

5-million-tonne-a-year LNG train at Pluto. Woodside is 90 percent owner of the singletrain Pluto LNG project, which started operations in 2012. The company has proposed to buy BHP's share of Scarborough gas when it reaches shore.

Draft plan calls for China to boost LNG capacity four-fold by 2035

(Bloomberg; Jan. 15) - China may boost its liquefied natural gas import capacity nearly four-fold by 2035 as it pushes toward using more of the fuel. The Ministry of Transport has proposed the nation operate 34 coastal terminals with total annual import capacity of 247 million tonnes by 2035, according to people with knowledge of the draft plan. That compares with the nation's total nameplate import capacity of 67.5 million tonnes at the end of last year, according to Bloomberg New Energy Finance.

China imported 47.5 million tonnes of LNG in the first 11 months of 2018. Several new import terminals already are under construction to ensure the country can meet demand. The plan for as many as 34 terminals is preliminary and could change, the sources said. The Transport Ministry did not respond to a request for comment. The Shanghai Petroleum & Gas Exchange posted information about the plan on its website Jan. 14, citing a report by the Southern Energy Observer.

President Xi Jinping's government has prioritized using more gas in place of coal for heating and power generation, sparking a race to boost supply and expand pipelines, storage tanks and import terminals. Total gas imports surged 32 percent last year as the nation overtook Japan to become the world's biggest buyer of seaborne LNG and pipeline gas. The boom was so big that China accounted for 65 percent of global LNG demand growth last year, according to analysts at Sanford C Bernstein & Co.

China's future LNG demand could depend on Russian pipeline gas

(Radio Free Asia; Jan. 14) - Despite higher costs and infrastructure problems, the Chinese government has shown determination to pursue its coal-to-gas switching policy even as the gap between domestic gas production and consumption grows. A study released last month by the Oxford Institute for Energy Studies suggests that China faces a critical period between now and 2020 with implications for the international LNG market, depending on how far the government pushes its fuel-switching campaign.

Though China's gas production inched up 6.6 percent in 2018, it will need to import a lot more gas to meet demand. However, the country's major Central Asian pipeline network from Turkmenistan is nearing its rated capacity. Another import pipeline through Myanmar is expected to deliver only modest volumes to China in 2020. And Russia's mammoth Power of Siberia gas pipeline, scheduled to open next December,

will be slow to ramp up. The rest of China's demand will have to be filled by LNG imports.

The report's authors see implications for LNG demand beyond 2020 if Russia's plans for larger volumes of pipeline gas deliveries to China are delayed. "If imports from Russia grow steadily, this makes it more likely that LNG imports will slow from 2020," the study said. "Conversely, if gas imports from Russia do not, for some reason, grow as planned, dependence on LNG will increase further."

China hits record in 2018 for gas imports, close to record for oil

(Reuters; Jan. 14) - China's crude oil imports in December surged nearly 30 percent from a year earlier to the second highest for a month on a daily basis, Reuters' calculations of customs data showed Jan. 14. December cargoes into China, the world's top oil buyer, averaged 10.31 million barrels per day, holding above the 10 million mark for the second straight month, just a touch below the record 10.43 million in November, according to the data released by the General Administration of Chinese Customs.

For all of 2018, China's oil imports rose 10.1 percent to a record 9.24 million barrels per day. This makes China the top crude oil importer for the second year running, after it first overtook the U.S. in 2017. Natural gas imports, including piped gas and liquefied natural gas shipped in tankers, hit a record in December at 9.23 million tonnes, up 17 percent from the same month in 2017. The previous monthly record of 9.15 million tonnes came in November.

The hefty gas imports were spurred by another year of strong demand growth for the cleaner-burning fuel as Beijing extended a campaign against smog by switching another 3 million homes to gas from coal for winter heating. Gas imports for the full year expanded 31.9 percent over 2017 to 90.39 million tonnes, holding the top spot among gas importers globally.

U.S. says Qatari investment in LNG project in Texas 'important'

(Reuters; Jan. 14) - The United States wants Qatar, the world's top liquefied natural gas supplier, to challenge Russia's gas dominance in Europe, a U.S. administration official said Jan. 14. Deputy Energy Secretary Dan Brouillette told Reuters that the United States is talking with Qatar about supplying Europe as it wants Germany and other countries to import Qatari and U.S. LNG rather than pipeline gas from Russia, which now accounts for 60 percent of Germany's gas imports.

Germany is Europe's biggest gas consumer. Brouillette, speaking in Doha, said he had discussed the issue with Qatar's Minister of State for Energy Affairs Saad al-Kaabi, who is also CEO of Qatar Petroleum. "We are talking to Minister Kaabi about other markets, specifically Europe, to the extent that we can talk to the Qataris about supplying European markets with natural gas," he said.

Kaabi told Reuters last month that QP is looking to invest at least \$20 billion in the United States over the coming few years and he expected to make a final decision on its investment in the Golden Pass LNG export terminal project in Texas soon. "The Qatari investments in Golden Pass and in U.S. export facilities are very important to allow us to get that natural gas to Europe," Brouillette said.

EIA forecasts record year for U.S. natural gas production in 2019

(Reuters; Jan. 15) - U.S. dry natural gas production will rise to an all-time high of 90.19 billion cubic feet per day in 2019 from a record 83.31 bcf per day in 2018, according to the U.S. Energy Information Administration's Short-Term Energy Outlook released Jan. 15. EIA also projected U.S. gas consumption would rise to an all-time high of 82.65 bcf per day in 2019 from a record 81.58 bcf in 2018.

U.S. gas exports by pipeline and as liquefied natural gas also will increase, the EIA said. In electrical generation the agency projected gas would remain the primary U.S. power plant fuel in 2019 and 2020 after first supplanting coal in 2016. EIA projected the share of gas generation would rise to 36 percent in 2019 and 37 in 2020 from 35 percent in 2018. Coal's share of generation was forecast to slide to 26 percent in 2019 and 24 percent in 2020 from 28 percent in 2018.

Developers plan \$1.2 billion for more U.S. gas storage capacity

(S&P Global Platts; Jan. 14) - Various midstream companies plan to add more than 210 billion cubic feet of working natural gas storage capacity at 17 sites in the U.S. over the next four years due to the rise of liquefied natural gas export terminals and gas-fired power generation, according to a report released Jan. 14. The additional gas storage is expected to cost \$1.2 billion, according to a report by the U.K. firm GlobalData.

"The ever-growing demand for natural gas in the U.S. is driving the growth of the underground gas storage industry in the country," said Soorya Tejomoortula, one of the study's authors. "The proposed gas-fired power plants and the LNG terminals are also aiding the underground gas storage industry growth." If all the projects come online, it would increase total working gas capacity in the U.S. to 4.9 trillion cubic feet.

No new significant gas storage fields have entered service over the past five years. The proposed projects are in Utah, Alabama, Pennsylvania, Louisiana, and Arizona, and the majority would involve salt-dome formations. Unlike depleted oil and gas fields or aquifers, salt-dome facilities allow for greater flexibility in switching from injections to withdrawals, more easily meeting peak demand for power generation or delivery to LNG export terminals. About 12 percent of all U.S. storage capacity is in salt caverns.

LNG Canada decision helps boost home values 30 percent in Kitimat

(Northern Sentinel; Kitimat, BC; Jan. 12) - Speculation over the LNG Canada project in Kitimat, British Columbia, followed by the October go-ahead from Shell and its Asian partners have pushed up the assessed values of single-family homes in the waterfront community of about 8,000. As of July 1, 2018, the average Kitimat home was assessed at \$235,300, a 20 percent jump from July 1, 2017, according to the BC Assessment Authority, with sales indicating an added 10 percent boost in the third quarter of 2018.

That is in stark contrast to the July 2016 to July 2017 assessment period which saw an average drop in the value of single-family homes of 16.2 percent. The BC Assessment Authority bases its values on real estate sales, and the annual July snapshot is used by local governments in setting property taxes. Residential home sales more than doubled from 2017 to 2018 and ended the year with a surge following LNG Canada's Oct. 1 final investment decision announcement, Kitimat REMAX realtor Graham Pitzel said.

Pipeline battles could create election problems in Canada

(The Province columnist; Vancouver; Jan. 13) – The arrest of gas pipeline protesters in northcentral British Columbia on Jan. 7 made headlines across Canada and beyond. At the offices of the consortium building the LNG Canada megaproject — the biggest in Canadian history — the images of armed police removing indigenous protesters were particularly jarring. "No one ever wants to see that sort of thing happen," said Susannah Pierce, the project's director of external relations.

You can bet the same concern was felt in the offices of B.C. Premier John Horgan and Canadian Prime Minister Justin Trudeau, both of whom could barely contain their glee when the C\$40 billion project was approved last year. It was a critical economic win for a pair of politicians facing big election tests. Trudeau faces an election this fall against a rejuvenated Conservative Party. And Horgan's government holds a narrow grip on power in the B.C. legislature, where the slightest hiccup could prompt a snap election.

Meanwhile, as the gas pipeline battle continues, some environmental groups have a warning: You ain't seen nothing yet. The Trudeau government last year bought the controversial Trans Mountain pipeline project, which would pump Alberta oil sands

crude to the coast. "If they try to restart Trans Mountain construction this summer, it will be like a political weight around Trudeau's neck in the fall," said Sven Biggs, climatechange campaigner with the environmental group Stand.earth. "I can't imagine him running a leader's tour and being constantly chased by protesters through B.C."

Alberta wants federal government to help move more oil and gas

(Calgary Herald; Jan. 14) – Alberta Premier Rachel Notley urged the federal government to step up and help Alberta's energy industry get its product to market during a news conference in Calgary on Jan. 14. As pressure mounts on the federal government to fast-track pipeline construction, Notley said she is disappointed that the province hasn't heard anything from Ottawa about interim programs to help move more oil out of the province to markets.

"There's no question that Albertans still need the federal government to step up and support the industry while we're trying to get through this ridiculousness of having not enough capacity to get our oil and gas to market," Notley said. She announced in November that Alberta would buy trains to move an additional 120,000 barrels per day out of the province starting late 2019. Lacking enough pipeline capacity, Canadian oil and gas producers have been selling their output at steep discounts to U.S. prices.

"The considerations that have led to the ridiculousness that all Albertans are so frustrated with right now, it has been in the making for decades," Notley said. "What we need to do is start planning outside of media cycles and quite frankly even outside of election cycles to make the fundamental structural changes that are necessary to get these kinds of projects built. We're in progress now but it's not happening fast enough."

Reuters' annual survey puts oil at \$65 to \$70 through 2023

(Reuters; Jan. 15) - Oil prices are expected to oscillate close to current levels well into the next decade, averaging \$65 to \$70 per barrel through 2023, according to an annual survey of energy professionals conducted by Reuters. Despite the recent slump in oil prices, forecasts have fallen by less than \$5 per barrel compared with the last annual survey conducted at the start of 2018 and have changed little over the past three years.

The results are based on the responses from just over 1,000 energy market professionals to a poll conducted between Jan. 8 and Jan. 11. Brent prices in 2019 are expected to average \$65 per barrel, unchanged from surveys in 2016, 2017 and 2018. In 2020 Brent, the heavily traded global benchmark, is again expected to average \$65 per barrel, revised down by \$5 or less compared with prior surveys.

Far fewer respondents now see any risk of prices spiking to \$100 or more by the end of the decade as a surge in U.S. shale output has eased fears of supply shortages. The proportion of respondents expecting prices to average more than \$90 in 2020 has fallen to just 3 percent this year, from 13 percent at the time of the 2016 survey. By 2023 prices are still expected to average \$70, with most forecasts between \$60 and \$80, which suggests most think there will be enough production to meet consumption growth.

Permian produced one-third of U.S. oil output in December

(Houston Chronicle; Jan. 14) – The Permian Basin of West Texas is beginning the new year on a strong note. Nearly three-fourths of the 245 drilling permits filed with the state during the first week of 2019 were from the prolific West Texas shale play. Of the 48 exploration and production companies that applied for those drilling permits, Pioneer Natural Resources led with 19 applications.

Following Pioneer were XTO Energy, an ExxonMobil subsidiary, with 17 drilling permit filings; Canadian oil company Encana with 12 applications; and Midland exploration and production company Endeavor Energy Resources with 11. Blessed with several oil and natural gas-rich geological layers, the Permian has become the top shale play in the U.S. As part of a phenomenon known in the oil and gas industry as "Permania," nearly half of the active drilling rigs in the United States can be found in the Permian Basin.

The West Texas shale play finished 2018 producing at a rate of nearly 3.75 million barrels of crude oil per day, according to the U.S. Energy Department. That's almost one-third of the country's total daily oil output in December.

Coal continues decline in U.S. power-generation mix

(Wall Street Journal; Jan. 10) - Just last summer, Northern Indiana Public Service planned to retire two of its five coal-fired power plants by 2023. Now it plans to do away with all five over the next decade — and buy more solar and wind power. The decision is part of a shift among some utilities toward less costly energy sources. The companies are accelerating the closure of coal plants as wind and solar power become more economical, aided by federal subsidies, and as gas continues to be a cheap fuel.

Northern Indiana Public Service concluded that phasing out coal sooner was worth it because it would move the company to cheaper sources of power and ultimately reduce costs for its 470,000 customers by as much as \$4 billion over 30 years. It has proposed raising average rates by \$11 a month starting later this year to cover higher short-term costs related to closing the plants, as well as grid upgrades. However, the company expects the accelerated closures will reduce its generation costs starting in 2023.

The U.S. Energy Information Administration estimated that domestic coal consumption in 2018 fell to 691 million tons, the lowest since 1979, and expects a further drop this year. Xcel Energy, which covers parts of Colorado, Minnesota and six other states, said coal could account for as little of 10 percent of its power mix by 2030. It was more than one-third in 2017. CEO Ben Fowke said improvements in technology have enabled Xcel to purchase wind and solar power at a fraction of the prices it paid a decade ago.

Partnership with China will build the Philippines first LNG terminal

(Reuters; Jan. 11) - Philippines company Phoenix Petroleum said Jan. 12 it has won government approval to build the nation's first liquefied natural gas import terminal for \$2 billion in partnership with China National Offshore Oil Corp. Phoenix, a fuel retailer, said it plans to break ground this year for the receiving and regasification terminal south of the capital Manila in a country that still relies heavily on coal as a fuel source.

The company is partnering with CNOOC Gas and Power Group, a unit of CNOOC and China's largest LNG importer and terminal operator. The facility is expected to have a capacity of 2.2 million tonnes per year with commercial operations targeted to start by 2023, Phoenix said in a regulatory filing. The Philippines has been looking to start up LNG imports to feed gas-fired power plants in Batangas, south of the capital, as domestic gas supplies from its Malampaya field are set to run out in 2024 at the earliest.

Raymond Zorilla, Phoenix vice president for external affairs, said investments will reach \$686 million for the regasification terminal and \$1.3 billion for the adjoining power plant. Dozens of domestic and foreign companies had expressed interest in the LNG project.

Pacific LNG spot-charter rates fall to half of last year's record high

(S&P Global Platts; Jan. 15) - The spot-charter rate for liquefied natural gas carriers has fallen below \$80,000 per day in the Pacific for the first time since late August. The lower price comes after the market hit a record high of \$190,000 during the fourth quarter on a lack of tonnage availability in Asia. The "ballast rate" is being assessed at 100 percent in the Pacific, meaning shipowners are charging full rate for the return leg of the voyage.

The availability of more ships to move LNG has helped drive down spot-charter rates. Shipping typically accounts for 5 to 20 percent of the delivered price of LNG, meaning big moves in charter rates can have a significant effect on the final price of delivered gas, though much of the world's LNG moves under long-term charter contracts.

Talks ongoing to build gas line from Israel to feed Egypt's LNG plants

(Bloomberg; Jan. 15) - Talks are in progress to build an underwater natural gas pipeline between Israel and Egypt, part of efforts to transform the eastern Mediterranean into an energy export hub on Europe's doorstep, Israeli Energy Minister Yuval Steinitz said. Work could begin as early as next year on the pipeline to transport gas from Israel's offshore Leviathan and Tamar fields, which hold trillions of cubic feet, to Egypt's two liquefied natural gas plants for processing and export, Steinitz said. The Egyptian LNG plants need new supplies to resume exports after several years of limited production.

The new line would allow Israel to export much more to Egypt than the maximum 250 billion cubic feet per year that can flow through the existing pipeline connecting southern Israel to Egypt's Sinai Peninsula. "There's no final decision yet, but there are talks," Steinitz said in Cairo, where he took part in the first East Mediterranean Gas Forum.

Oil ministers from Egypt, Israel, Greece, Cyprus, Jordan, Italy, and the Palestinian Authority joined the gathering, where they agreed to work together to monetize reserves by using existing infrastructure and adding more capacity. The meeting came nearly a year after the signing of a \$15 billion, 10-year deal to export Israeli gas to Egypt — a landmark deal reached after years of litigation.